CHAPTER - III

METHODOLOGY
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>CONTEXT AND SIGNIFICANCE OF THE STUDY</td>
<td>100</td>
</tr>
<tr>
<td>3.2</td>
<td>STATEMENT OF THE PROBLEM</td>
<td>111</td>
</tr>
<tr>
<td>3.3</td>
<td>OBJECTIVES OF THE STUDY</td>
<td>111</td>
</tr>
<tr>
<td>3.4</td>
<td>DEFINITIONS OF THE TERMS</td>
<td>112</td>
</tr>
<tr>
<td>3.5</td>
<td>HYPOTHESES OF THE STUDY</td>
<td>113</td>
</tr>
<tr>
<td>3.6</td>
<td>STRATEGY AND METHODOLOGY OF THE STUDY</td>
<td>114</td>
</tr>
<tr>
<td>3.7</td>
<td>UNIVERSE AND POPULATION</td>
<td>114</td>
</tr>
<tr>
<td>3.8</td>
<td>SAMPLING</td>
<td>115</td>
</tr>
<tr>
<td>3.9</td>
<td>SOURCES OF DATA</td>
<td>118</td>
</tr>
<tr>
<td>3.10</td>
<td>PILOT STUDY</td>
<td>118</td>
</tr>
<tr>
<td>3.11</td>
<td>TOOLS OF DATA COLLECTION</td>
<td>118</td>
</tr>
<tr>
<td>3.12</td>
<td>PRE-TEST</td>
<td>125</td>
</tr>
<tr>
<td>3.13</td>
<td>DATA COLLECTION</td>
<td>125</td>
</tr>
<tr>
<td>3.14</td>
<td>DATA ANALYSIS</td>
<td>126</td>
</tr>
<tr>
<td>3.15</td>
<td>STATISTICAL TECHNIQUES</td>
<td>126</td>
</tr>
<tr>
<td>3.16</td>
<td>DATA INTERPRETATION</td>
<td>126</td>
</tr>
<tr>
<td>3.17</td>
<td>SCOPE OF THE STUDY</td>
<td>127</td>
</tr>
<tr>
<td>3.18</td>
<td>LIMITATIONS OF THE STUDY</td>
<td>129</td>
</tr>
<tr>
<td>3.19</td>
<td>FORMAT OF THE REPORT</td>
<td>129</td>
</tr>
</tbody>
</table>
3.1. Context and Significance of the Study

Parents, teachers, religious leaders, psychologists and social workers say that adolescence is the most unpredictable and troublesome period of development. According to Eldes G.H. (1963) this period is characterized by the role confusion, the frustration, up-rootedness, indefiniteness and identity crisis. It is a period of rapid, disorganized, and unbalanced, chaotic growth into the blooming, buzzing confusion and a matrix of chaotic privileges and responsibilities.

Adolescence is a period of change. There are five almost universally concomitants of the changes that occur during adolescence. The first is the heightened emotionality. Second by, the rapid changes that accompany sexual maturing which makes young adolescents unsure of themselves, of their capacities and of their interests. They have strong feelings of instability, which are often intensified by the ambiguous treatment they receive from parents and teachers. Third by, changes in their bodies, their interests, and in the roles the social group expects them to play. Fourth by, interests and behaviour patterns change, so do value. What was important to them as children seems less important to them now that they are near adults. Fifth by, most adolescents are ambivalent about changes. All these changes necessarily create new problems and associated new challenges to them, which highly require the utilisation of their potential creative talents and capacities.
According to Wolf and Larsen (1981), adolescents have to utilise their potential creativity more than children, because of their need to win their peers and the adult world. Dudek (1974) expressed that young adolescents are temporarily less creative, because they are mastering the skills of the formal stage of operations. After acquiring these skills, adolescents' creative performance should increase. They should start utilising their potential capacities, the inherent substantial gifts and talents they have in abundance through the functionalisation of the creativity. But unfortunately the researchers in this field observe that the creative performance of adolescents is rather poor or there is an experience of the deadening of creativity during this period.

The creativity of children is instinctual. On the other hand, the creativity of adolescents is more rational and productive. This is the time they become familiar with the operational and formal thinking with which they start diverging from the traditional and convergent. If we draw a graph of the creativity functioning of a normal human being we should observe a sharp upward trend with their adolescent period than any other period. During this period, the instinctual curiosity turns to rational search for identity, achievements, acceptance, and challenges which highly require the operationalisation of their potential creative capacities.

According to Guilford and Torrance, intelligence depends on convergent thinking, while creativity depends on divergent thinking. (Guilford, 1967 and Torrance, 1966). Convergent thinking, the process of operationalising the intelligence, leads to discovery of single, correct answer to the problem. In
contrast divergent thinking is the process of functionalising creative potential and the act of producing a variety of solutions to problems that have no single correct answer. Divergent thinking, the process of functional creativity has three aspects, which are measured on standardized tests, fluency, flexibility and originality. Fluency is the youngster's ability to produce a large number of responses, flexibility is the ability to create many different categories of responses, and originality is the ability to create unique and new answers. These abilities are the results of the effective utilisation of the potential creative capacities.

Torrance describes potentially creative youngsters as nonconformists who dislike too much authority or structure. Potentially creative youngsters generally dislike rules, prefer working alone, and may be rebellious about constraints. They tend to be more tolerant of ambiguity and more socially poised, mature, ambitious, and self-confident than their peers are. The relationship between adolescent and adult creativity is curious in some respects. Creative adolescents typically grow up to be creative adults, who often pursue the unusual careers which they envisioned during their youth. (Torrance, 1972). Being functionally creative during adolescence requires the self-discipline to convert creative urges into a product. (Parloff et. al. 1968) In a class of 16 year olds who have not been creative before coming to-secondary school studies, the chances are very slender that at 18 they will start to be creative; indeed research has shown that many a creative talent goes into disuse between the age group of 16 to 19. More over it is dangerous to
take it for granted that we should not develop the potential creativity of individuals to the appropriate functioning levels.

Passi and M.S. Lalitha (1975), in their study, have found that after the early childhood, adolescence is the most creative age. The functioning of creativity of adolescence is superior to the child’s creativity, because, it is more rational, responsible, productive and independent while the child’s creativity is instinctual. (Rosenburg 1965). Though adolescence is a creative age and the functioning of creativity is crucial for success in adult life, researchers have identified a process of deadening or sterilization in the development and maturation of creativity potentials. (M.K.Raison 1971 and William Vialki 1973). Many highly creative children become less creative in their adolescence and adult life. (H.Olive1972).

There is another feeling that many of the problem behaviours exhibited by the adolescents may be due to this under-utilisation of the creative potential. But the researchers have not given a solid reason for this phenomenon. Therefore it is significant to study what happens to the potential creative force of children when they grow to adolescence and why this potential force does not contribute its due to the individual, family and the society.

Self-concept and achievement motivations are the motivational variables of functional creativity. Self-concept and achievement motivations are dependent on different socio-familial correlates. The functioning of creativity is dependent on self-concept and achievement motivation. Hammer (1961), Mackinnan (1962), Workman and Stillion (1974) Gupta (1977), in their studies very clearly
emphasized the influence of self-concept on creativity functioning. According to them, the self-concept, which has many dimensions, works as the motivating factor in the functioning of creative ability of people. Among the important main springs, which motivate behaviour, good or bad, in the emotional need are common to all of us. A basic need is the construction of a healthy self-concept, the painting of a self-portrait, which gives satisfaction to the person as an individual and as a human being who interacts with other people. According to E. Erickson (1963), the major challenges of adolescents is the creation of adult identity. This is accomplished primarily through choosing and developing commitment to an occupation or a role in life.

In the early years of adolescence, conformity to the group is still important to boys and girls. Gradually they begin to crave identity and are no longer satisfied to be like their peers in every respect as they were earlier. According to Erickson (1963), the identity the adolescent seeks to clarify who he is, what his role in society is to be. Is he a child or is he an adult? Does he have it in him to be someday a husband and father? Can he feel self confident, in spite of the fact that his racial, religious or national background makes him a person some people look down upon? Above all, will he be a success or a failure?

Erickson has further explained how this search for identity affects the adolescents’ behaviour. In their search for a new sense of continuity and sameness, adolescents have to re-fight many of the battles true of earlier years. The integration taking place in the form of ego identity is more than the sum of childhood identifications.
Self-concept has been referred by Lowe (1961) as one's attitude towards self, and by Paderson (1965) as an organized configuration of perceptions, beliefs, feelings, attitudes and values which the individual views as part or characteristics of himself. The self, which maintains a distinct characteristic individuality or identity of a person, is the foundation for the formation of personality, achievement motivation and functioning of creativity. The self-concept, which refers to the cluster of the most personal meanings a person alludes to his 'self' is not a finished product at birth. It is not an actualized reality at birth but an open book of innumerable potentialities. It is something, which develops, and how it develops and what its constituent attitudes depend upon the family and the psychological environment where the individual is borne and brought up. (Gells 1974)

The self is the totality of our impressions, thoughts and feelings such that we have a continuing conscious sense of being. Rogers defines the self as an organized, consistent, concept gestalt composed of perceptions of the characteristics of the 'I' or 'Me' and the perceptions of the relationships of the 'I' or 'Me' to others and to various aspects of life, together with the values attached to these perceptions. Self-concept is the sum total of all an individual can call his own, including both physical and mental data. It is a composite of ideas, feelings and attitudes a person has about himself. It includes one's self esteem sense of personal worth, and one's sense of who or what one would like to be or one's ideal self.
Mishra N.K (1991) explored the effect of self-concept, achievement motivation and academic achievement and obtained that ‘self-concept had significant effect on achievement motivation and achievement of students’. Panwar P.S. (1986) found that academic achievement had significant effect on self-concept, the family background had significant effect on self-concept, school background had significant effect on self-concept. Pathani (1985), conducted a study on 700 adolescents and found that self-concept is a significant predictor of achievement motivation. Lewis (1971) found that, a significant relationship existed between the general self-concept and other self factors and achievement motivation. Robert (1977) reported that, adolescent’s performance in schools more often affected the self-concept and creativity”. Thus self-concept has a significant effect on achievement motivation.

The basis of achievement motivation is achievement motive that is a motive to achieve. Those who engage themselves in a task on account of achievement motive are said to work under the spirit of achievement motivation. The study of motivation gained importance since the early ‘50s with the efforts of Mc Clelland and his associates at Wesleyan University, U.S.A. The term motivation refers to any organismic state that mobilizes activity that is in some sense selective or directive. With respect to the environment (Newcomb, 1964), achievement motivation is an acquired tendency and is one of the most important social needs. Mc Clelland and his associates (1953), have defined it as a disposition to strive for success in competition with others or with some standard of excellence set
by the individual. Motive to achieve requires an act or some norm of excellence, long term involvement and unique accomplishment (De Charms 1968). These are the criteria set by Mc Clelland and his associates (1953). In fact this is one of the most important manifest social needs and personality variable enlisted by Murray (1938).

Mc Cleland (1961) considered that human motivation could be understood in terms of needs, but emphasized the importance of social needs, rather than physiological or basic activity. The two needs which he particularly identified in this aspect were the need for achievement (often referred to as the n-Ach) and the need for affiliation. Mc Clelland proposed that achievement motivation was the reason why some people seem to be very keen to do well, while others seem to be reluctant to make an effort, and do mind whether they are successful or not. He also argued that different societies, as well as individuals, showed different levels of achievement motivation.

Atkinson (1974) defines achievement motivation as the, striving to increase one’s own capacity in or activities in which a standard of excellence is thought to apply and where the execution of such activities can either succeed or fail”. Achievement motivation is thought to arise from needs to persue excellence, reach lofty goals, or succeed in difficult tasks. It involves competing with others or against some internal or external standard.(Spencer & Helmerich 1983.)

According to the studies of Raina (1970), Kumar and Raina (1976), Rathidevi (1984) achievement motivation is working as another motivational factor.
for the effective functioning of creativity. Self-concept also is important with regard to achievement motivation, because, people who feel favourably about themselves tend to work hard. (Felson 1984). Differences in achievement motivation depend on individual definitions of what constitute achievement, expectations of failure and fears of rejection. One must also consider ability, skill, energy, self-concept and the like.

The preliminary analysis of the literature available exposes the lacunae in the scientific research arena about the creativity, Self-concept and achievement motivation, of the adolescents. The practical concerns also emphasize the significance of studying how the creativity of adolescents is related or affected by their self-concept and achievement motivation. From the social workers’ point of view, the creativity of adolescents is of great significance because, they can play a role to enhance the creativity of adolescents and there by utilize their immense potentialities to effect the integral and sustainable development of the society.

Creativity is a natural talent inherent with almost every human being. As it was considered and conceived in the earlier days, it is not the possession of a select few. If this grace is not properly nurtured and used, the developmental processes may be badly affected and more than that, this explosive energy may be converted to destructive purposes. In such conditions, the adolescents will turn out to be problems for themselves and the society. This is a serious issue because instead of utilising the potential energy that is wasted and made to be problems
which require another interventions and efforts to solve the problems and to make the adolescents properly adjusted to the living conditions.

Confusion, tension, competition and violence characterize the present age. The creative potential seldom gets proper channels for its utmost expression. The child is lost amidst highly mechanical and routine life. This has posed a serious problem for the psychologists, social workers and the educationists. The creative potential, present within a man, if not properly expressed through constructive channels, would generate suffocation and divert his creative ability towards destructive tendencies. If this constructive and imaginative endeavour is not properly catered, it will generate more and more frustration within the individuals. Any blockage to creative expression on the part of human beings will lead to their psychological death. The human being, which is the supreme creation of God, may not justify the purpose of his existence, which is meant for creating something novel on the earth and ultimately for adding beauty to his creator's gift.

The reality we experience about the deadening of the creativity especially that of very potential and talented ones, during adolescence is alarming and the researcher finds it very essential to find what happens to the creativity of adolescents. The researchers have proposed the problem that the adolescents are not utilising their creative potentials as is expected from them. The reasearch with the problem children in schools and the educational institutions say that many of them have inappropriate opportunities to express their talents or many
of them are under or unutilised. It remains an alarming reality that the adolescents are not utilising their creative capacities. (Pathak 1962, Yamamoto 1965, Flory 1978, Kumari 1982, Mathew 1986 and Kim 1993)

In addition to this, the Kerala Higher Secondary Education System is undergoing a tumultuous revolution by the introduction of the plus-Two system in selected state syllabus high Schools. The Adolescents who are the students of this system were in the colleges where they got more freedom, autonomy, and opportunities to express their creativity and other faculties and are now confined to obsolete same system of school education.

The educationists, psychologists, social workers and the parents are concerned about these systems of education and many of them have a common opinion that the CBSE system of Higher Education is better than the Present State Syllabus System. The parents do think in this line and they try to transfer their children from the State Syllabus to the CBSE Schools. There is also a popular thinking that the CBSE schools are far better than the State Schools with regard to the development of the students. The experts in the field say that the students of the CBSE system have better self confidence and achievement motivation than the State Syllabus Higher Secondary students.

Even though these doubts and confusing observations are so prevalent, no serious scientific inquiry or research study has been made to verify their veracity. Hence the researcher considers it very important to study whether there is any difference with the levels of the creativity, self-concept and achievement.
motivation of the adolescents studying in the State Syllabus and CBSE Syllabus Higher Secondary Schools. Hence the researcher proposes this problem for the study.

3.2. Statement of the Problem

The problem proposed for study is ‘Adolescents’ Creativity with reference to the Self-Concept and Achievement Motivation’.

3.3. Objectives of the Study

a) General objective:

The research aims to analyse the levels and relationships of creativity self-concept and achievement motivation of adolescents.

b) Specific objectives:

1) To assess the creativity, self-concept and achievement motivation of adolescents.

2) To explain the relationships between creativity, self-concept and achievement motivation of adolescents

   A) To study the relationship between creativity and self-concept of adolescents.

   B) To analyse the relationship between creativity and achievement motivation of adolescents.

   C) To explain the relationship between self-concept and achievement motivation of adolescents.

3) To compare the Creativity, Self-Concept and Achievement Motivation of male and female adolescents studying in CBSE and State Syllabus Schools.
4) To assess and compare the self-concept and achievement motivation of low, average and high creative adolescents.

A) To measure and compare the self-concept of the low, average and high creative adolescents.

B) To compute and compare the achievement motivation of the low, average and high creative adolescents.

5) To assess and compare the achievement motivation of adolescents with low, average and high self-concept.

3.4. Definitions of the Terms

A) Adolescents:

Adolescents in this study refer to people in the age group of 16 to 18 years and are studying in 11th & 12th standards of both C.B.S.E and State Syllabus Higher Secondary Schools in the geographical area of Kochi Corporation.

B) Creativity:

Creativity in this study refers to the potential capacity and basic urge of adolescents to produce original, novel, productive idea or work in any field of life and is measured with the Wallach and Kohan Creativity Instrument (Kerala adaptation by Dr. C.B. Asha, 1990).

C) Self concept:

The term self-concept is defined in this study as the way, in which an
adolescent perceives and defines him or herself. It also refers to the cluster of the most personal meanings he or she alludes to the self and is measured with the Self-concept Inventory of Rajkumar Saraswat (1984).

**D) Achievement Motivation:**

Achievement motivation in this study means the disposition of adolescents to strive for success in competitions and a drive to achieve with some standard of excellence, and is measured with Deo-Mohan Achievement Motivation (n_Ach) Scale (1985).

3.5. **Hypotheses of the Study**

1) Creativity, self-concept and achievement motivation of adolescents have significant correlation.

   A) There is a significant relationship between creativity and self-concept
   B) The relationship between creativity and achievement motivation of adolescents is significant.
   C) Self-concept and achievement motivations of adolescents are significantly related.

2) There is a significant difference between the creativity, self concept and achievement motivation of male and female adolescents studying in the C.B.S.E. and State syllabus Higher Secondary Schools.

3) The difference between the self-concept and achievement motivation of the low, average and high creative adolescents is significant.
A) The self-concept of the low, average and high creative adolescents is significantly different.

B) The difference between the achievement motivation of the low, average and high creative adolescents is significant.

4) The achievement motivation of adolescents with low, average and high self-concept is significantly different.

3.6. Strategy and Methodology of the Study

In this study the researcher uses the normative survey method. This type of research usually describes and interprets what exists at present. This is concerned with conditions or relationships that exist, policies that prevail, beliefs, points of view or attitudes that are held, processes that are going on, effects that are being felt or trends that are developing. Since the purpose of this study is to find out, describe and interpret the levels and relationship of self-concept, achievement motivation and the creativity of adolescents, this is an explanatory cum descriptive research, which uses the normative survey method.

3.7. Universe and Population

All the adolescents in the age group of 16 to 18 years who are studying in 11th and 12th standards in the Higher Secondary schools in the geographical area of Kochi Corporation constitute the universe of this study. This include both the C.B.S.E and State syllabus Schools. There are 2150 Higher Secondary students in the Ten C.B.S.E Schools and 3150 Higher Secondary students in the Eleven
State Syllabus Higher Secondary Schools in the geographical area of Kochi Corporation.

3.8. Sampling

Since the population is considerably high the researcher used sample study.

a) Sample Size.

800 adolescents (i.e. about 15% of the total population) in the age group of 16 to 18 years studying in the 11th and 12th standards of both C.B.S.E and State syllabus in the geographical area of Kochi Corporation are selected as the sample of the study from the population.

b) Sampling Technique.

The researcher has applied the Multi-staged Stratified Random sampling technique to select the sample from the population. Out of the 21 higher secondary schools (Ten C.B.S.E Schools & Eleven State Syllabus Higher Secondary Schools) in the geographical area of Kochi Corporation, the researcher selected 16 Schools in the first phase. This selection was made using the lottery method. The rationale behind this selection is fixing a quota for making an equal representation of both the C.B.S.E and State Syllabus students. Then, from the selected 16 schools 50 (25+25) students each were selected from 11th and 12th standards. The 1:1 ratio of the male and female representation is maintained. The second stage of sampling, i.e. selection of respondents, was done from the attendance register with the help of the concerned teachers. The representation of the sample from each school is detailed below.
Table No: 3.1

Table showing the sample distribution selected from C.B.S.E. Higher Secondary Schools

<table>
<thead>
<tr>
<th></th>
<th>XI Boys</th>
<th>XI Girls</th>
<th>XII Boys</th>
<th>XII Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Al-Ameen Public School, Edappally, Kochi.</td>
<td>12</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>2. Bhavan's Vidya Mandir Girinagar, Kochi.</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td>3. Chinmaya Vidyalaya Vaduthala, Ernakulam.</td>
<td>13</td>
<td>12</td>
<td>12</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td>4. The Delta Study Fort Cochin, Kochi</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>5. Naval Public School Naval Base, Kochi.</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td>6. S.B.O.A. Public School, S.Chittoor, Kochi.</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td>7. Toc-H Public School, Vyttila, Kochi</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>8. Greets Academy, Kaloor, Kochi</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>400</td>
</tr>
</tbody>
</table>
Table No: 3.2

Table showing the sample distribution selected from State Syllabus Higher Secondary Schools.

<table>
<thead>
<tr>
<th></th>
<th>XI</th>
<th>XII</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>1.</td>
<td>Govt. H.S.S, Edappally, Kochi.</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>2.</td>
<td>Sacred Heart H.S.S. Thevara, Kochi</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>St. Theresa’s G.H.S.S Ernakulam, Kochi.</td>
<td>-</td>
<td>25</td>
</tr>
<tr>
<td>4.</td>
<td>Daruloom H.S.S, Pullepady, Kochi</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>5.</td>
<td>St. Albert’s B.H.S.S Ernakulam, Kochi.</td>
<td>25</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Govt. G.H.S.S Ernakulam, Kochi</td>
<td>-</td>
<td>25</td>
</tr>
<tr>
<td>7.</td>
<td>Sree Narayana H.S.S, Ayyappankave Kochi.</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Thus there are 800 respondents from Eight strata in the sample selected such as; C.B.S.E 11th Standard boys 100; girls 100; 12th Standard boys 100; girls 100 State syllabus 11th Standard boys 100; girls 100; 12th Standard boys 100 and girls 100.

3.9. Sources of Data

The data required for the research are collected directly from the respondents who are the adolescents in the age group of 16 to 18 years studying in the 11th and 12th standards of both C.B.S.E and State syllabus Schools in the geographical area of Kochi Corporation by administering the specific tools.

3.10. Pilot Study

The researcher conducted a pilot study in the geographical area of Kochi Corporation to analyze and verify the possibilities and difficulties to assess the feasibility of the study. He consulted various key persons in this field and ensured necessary permissions and assistance from different schools and other authorities to carry out the study. These pilot inquiries and study have helped the researcher to modify and design the study appropriate to the research problem and objectives.

3.11. Tools of Data Collection

To collect data, the researcher administered three standardized and structured questionnaires along with the personal data sheet. The details of the pre-tested tools used for data collection are furnished below.
A) Descriptive test of creativity

To study the potential creativity of respondents, the ‘Wallach and Kogan Creativity Instrument’ (Kerala adaptation developed by Dr. C.B. Asha, The Head, Department of Psychology, University of Calicut. 1990) is used. Creative capacity is explained as an urge of directed thinking in which the individual may discover new relationships, achieve new solutions to problems, invent methods or devices, produce new artistic objects or forms, strive to satisfy a creative motive, challenge the accepted old, become sensitive to problems, deficiencies, gaps in knowledge or missing elements, etc. (Torrance, 1962; Mac Kinnan, 1962; Guilford, 1962). The descriptions of potential creativity suggest that it becomes functional of the constellation of certain psychological attributes, such as, affective, motivational and personality characteristics. It is on the basis of this assumption that the Descriptive Test of Creativity is developed.

The descriptive test of creativity consists of statements about the potential aspects of creativity. The statements are about both positive and negative qualities of the potentially creative individuals that are regarded as the special characteristics, capable of differentiating creative individuals from the non-creative population. These creative positives and creative negatives are derived from a large pool of characteristics reported in the creativity literature as possessed by creative children and adolescents. Only those aspects of behavior that are most frequently observable among potentially creative people are included in this test.
The rationale underlying the descriptive test of creativity is that the presence of considerable number of these qualities in an individual is an indication of he/she is endowed with an urge to generate original, novel and unique products, associations or ideas. The test is mainly intended as a device for screening and assessing the levels of the potential creativity of children and adolescence.

Test Development:

The items in the test were prepared based on information gathered from published literature on creativity. The 45 items thus selected were given to a board of subject experts for scrutiny and based on their suggestions, the inventory was revised and then it was administered to a sample of 200 secondary school children. For the purpose of item analysis, the procedures suggested in statistics were followed. Items with a discrimination index of 0.14 and difficulty indices within a range of 0.05 and 0.95 were included in the final form of the inventory.

Descriptive test of creativity is a forty-item inventory.

Reliability and validity:

The odd-even reliability of the descriptive test of creativity is found to be 0.82. For the purpose of calculating odd even reliability coefficient, the test was administered to a randomly selected sample of 85 students. The validity coefficient, when scores on descriptive test of creativity were correlated with those on adapted version of the test of creative thinking abilities-short scale (Asha 1990), was found to be 0.78.
B. Self-Concept Questionnaire (SCQ)

To study self-concept "The Self -Concept Questionnaire of Dr. Rajkumar Saraswat" (1984) is used. There are several terms that are virtually synonyms with self-concept. Popular among them are, "self image", the "ego", "self understanding", "self perception" and "phenomenal self". Rogers (1951) defined self-concept as, an organized configuration of perceptions of the self which are admissible to awareness.

Self -Concept is composed of such elements such as the perceptions of one’s characteristics and abilities, the percepts and concepts of the self in relation to others and to the environment, the value qualities perceived as associated with experiences and objects, and the goals and ideals perceived as having positive or negative valance. Saraswat and Gaur (1981) describe the, self-concept as the individual’s view of looking at himself. It also signifies his/her way of thinking, feeling and behaving.

Adolescence is a period of life with its on peculiar characteristics and problems. Hence for deep penetration into their perceptions, their own physical, social, temperamental, educational, moral and intellectual spheres of self-concept need to be explored. As such, an attempt has been made in this questionnaire for eliciting information regarding the adolescents’ perceptions and characteristics. Description of self-concept inventory:

The self-concept inventory provides six separate dimensions of self-concept, which are, physical, social, intellectual, moral, educational and
temperamental. It also gives a total self-concept score. The operational definitions of self-concept dimensions measured by this inventory are:

1) Physical: Individuals’ view of their body, health, physical appearance and strength.

2) Social: Individuals’ sense of worth in social interactions.

3) Temperamental: Individuals’ view of their prevailing emotional state or predominance of a particular kind of emotional reaction.

4) Educational: Individuals’ view of themselves in relation to school, teachers and extra curricular activities.

5) Moral: Individuals’ estimation of their moral worth; right and wrong activities.

6) Intellectual: Individuals’ awareness of their intelligence and capacity of problem solving and judgements.

The inventory contains 48 items. Each dimension contains eight items. Each item is provided with five alternatives. The respondent is provided with five alternatives to give his responses ranging from most acceptable to least acceptable description of his self-concept. The alternative or responses are arranged in such a way that the scoring system for all items will remain the same i.e., 5,4,3,2,1 whether the items are positive or negative. This obtained score of all the 48 items provides the total self-concept score of an individual. A high score on this inventory indicates a higher self-concept, while a low score shows low self-concept. The added score of all eight items of a particular dimension of self-
concept will provide the score for that particular dimension of self-concept.

**Reliability:**

The reliability of the inventory was found by test-retest method, and it was found to be .91 for the total self-concept measure. Reliability coefficients of its various dimensions vary from .67 to .88. The following table shows the test-retest reliability for each dimension.

**Validity:**

Experts’ opinions were obtained to establish the validity of the inventory. 100 items were given to 25 psychologists to classify the items according to the category to which it belongs. Items of highest agreement and not less than 80% of agreement were selected. Thus the content and construct validity were established.

**C) Deomohan Achievement Motivation (n-Ach) Scale**

To study the achievement motivation the ‘Deo-Mohan Achievement Motivation (n-Ach) Scale’ is used. Achievement motivation, as the acquired tendency and one of the most important social needs, has been defined by Mc Clellend and his associates (1953), and also by Decharms (1968) as a disposition to strive for success in competition with others or with some standard of excellence set by the individual. Motive to achieve requires an act or some norm of excellence, long term involvement and unique accomplishment. These are the criteria set by Mc Clellend and his associates (1953). In fact this is one of the most important manifest and social needs and personality variable enlisted by Murray (1938).
To prepare the present scale, an effort was made to study the factors suitable for measuring the achievement motivation apart from the standard of excellence, unique accomplishment and long term involvement. Indicating achievement imagery suggested by McClelland and Atkinson, the following factors were classified as cues of achievement imagery. All these factors were accepted for providing the bases to prepare the items in the scale of achievement motivation. The items were selected on the basis of certain criteria as follows.

1). Selected item should evolve the achievement imagery in the respondents.
2). It should be related to their achievement experiences based on situations known to them.
3). The item should be comprehensible to the respondents.
4). The language of the item should be such that respondents can immediately identify with the situation expressed in the item.

Reliability of the Scale:

Test retest method was applied to obtain the reliability coefficient of the scale. Taking different sets of sample, the administration of the scale was repeated on several occasions. The coefficient of reliability of the present scale, established by test-retest method is sufficiently high and very satisfactory. Thus the scale is quite reliable for use.

Validity of the Scale:

As far as the validity of the scale is concerned, in the first instance, the item validity, established by high-low discrimination method, was accepted as the
validity of the whole measure. Besides, this scale is also used for validating the projective test of achievement motivation. The coefficient of correlation between the scale and the projective test was observed to be .04, which speaks for the validity of the scale also. Finally the scale scores were also correlated with the scores obtained by administering the ability in Academic Motivation Inventory of Entwistle (1968), yielding a coefficient of correlation as .75 for mixed sample of 93; this correlation is high enough to establish the validity of the scale. The present scale of achievement motivation is sufficiently valid for measuring achievement motivation.

3.12. Pre-Test

To verify the appropriateness of these tools of data collection, the researcher administered them to 100 adolescents, 25 each from 11th and 12th standards of both C.B.S.E and State syllabus. 1:1 ratio of male and female was ensured. The collected data were treated statistically and the results were interpreted. The researcher found these tools of data collection well adapted and sufficiently appropriate to elicit the required data.

3.13. Data Collection

These tools for data collection were administered in groups of 50 subjects, (the selected sample from one school) at a time. They were supplied with the booklets and answer keys of the tools followed by proper instructions. Though there was no time limit, the subjects were asked to work fast and give their honest, frank and first response to each item. Every item was to be answered by every
subject. After the subjects finished their responses the test booklets were collected along with the answer sheets.

3.14. Data Analysis

The collected data were coded according to the answer keys and the scores of each item of each tool of each respondent were abstracted and summated according to the requirements. The scores then transferred to the master sheet in the computer. Then the summated scores were tabulated and edited for appropriate statistical treatment. The entire process of data analyses and interpretation is organized on the basis of the objectives and hypothesis.

3.15. Statistical Techniques

"Percentage analysis", "Pearson's Correlation test", "t-test for equality of means", "Multiple Regression" and "One-way Anova" are the statistical devices applied in the process of data analysis. They are used for establishing the relationships and general trends existing among the variables and making the comparisons between the sub-groups.

3.16. Data Interpretation

The results derived from the statistical treatment of the data were interpreted on the basis of the available theories and other established findings of the research studies. From these interpretations, the researcher has traced the general trends, findings and conclusions which have helped him in the process of accepting and rejecting the hypotheses.
3.17. Scope of the Study

This study, being interdisciplinary in approach (Social work, Psychology, and Education), has a very wide scope and applications. This study provides some theoretical formulations and practical guidelines and so has both theoretical and practical value.

The modern trends in social work approaches indicate a shift of emphasis from traditional approaches to the advanced dynamic approaches. Since the study is trying to elucidate and re-emphasize the vitality of self-concept and achievement motivation on the functioning of creativity of adolescents, it is of real value in the theory and practice of social work.

The study centres around the phenomenon of “adolescence” which is considered to be the most crucial period of life and the most difficult group of people to handle both in family and society. In this regard, the study provides some concrete workable findings and guidelines which will be of great use for the social workers, teachers and the family members to handle this period more effectively and productively.

The study explores the self-concept, creativity and achievement motivation of adolescents and is of enormous importance to the theoretical fields of applied psychology, education and social work.

Today’s educational systems and ambitious parents give undue emphasize to the ability of their child in convergent thinking and academic achievement, neglecting creativity, the most important ability of human being to visualize the
future and to produce some original productive works. This study is an attempt to recapitulate the importance of creativity and the need for integral personality development.

The study also highlights how the present educational system can be improved by giving proper emphasis to creativity. The study can help the parents, teachers, religious leaders, psychologists and social workers to give proper importance to self-concept creativity and achievement motivation of adolescents to effect their integral involvement for maximizing the individual contributions to family, nation and humanity as a whole.

Since achievement motivation is the mother of inventions and development, this study which explores the relationship of creativity and achievement motivation provides some important guidelines for making people optimally motivated for real achievements. This study also may be a good help for the concerned to guide the adolescents, to develop their creativity by boosting up the self-concept and appropriate achievement motivation.

This study provides some theoretical explanations and conceptual clarifications about adolescents, their self-concept, their creativity and their achievement motivation; which are not much researched or deliberated and are highly useful for further studies.

This study also brings some important but unnoticed problems and areas for further researches and studies and can work as a directing torch for the researchers interested in these fields.
3.18. Limitations of the Study

The study focuses on the 11th and 12th standard students in the C.B.S.E and State Syllabus, which do not necessarily include all the adolescents in the universe of the study.

The sample is collected from the geographical area of Kochi Corporation alone and, therefore, the possibility of generalizing the findings with other populations may be little difficult.

The information provided by the respondents also may be unreliable to some extent as in the case of any other social science research studies because of the common tendency to be good before others.

The tools are standardized scales, which include only objective type questions with structured answers. This has limited the soliciting of other qualitative informations, which would have been very useful in the study.

In this study, the researcher was not able to attempt to study or control the effect of certain interlinked variables like intelligence, school environment, other motivational variables, socio-cultural correlates of the variables etc. This has limited the accuracy of the study.


For the convenience of presentation and also for the easy comprehension of the complete study, the report is chaptrised as follows.
Chapter 1  Introduction
Chapter 2  Review of Literature
Chapter 3  Research Methodology
Chapter 4  Data Analysis and Interpretation
Chapter 5  Findings, Conclusion and Suggestions

After the five chapters, a detailed bibliography and an appendix which includes the complete tools used for data collection are provided.